

CLAIMS

What is claimed is:

- Sub A' 1
2
3
4
5
6
7
8
1. A wireless mobile phone comprising:
 - a transceiver for transmitting and receiving signals;
 - a plurality of sensors to sense and output blood flow rate data of a user holding the wireless mobile phone, with the sensors being distributively disposed at a plurality of locations of the wireless mobile phone; and
 - means coupled to the sensors to infer a holding pattern of the wireless mobile phone and to generate a heart rate of the user using a subset of the blood flow rate data output by said sensors, based at least in part on the inferred holding pattern.
 - 1 2. The wireless mobile phone of claim 1, wherein the sensors comprise a first
2 and a second subset disposed along a first and a second edge of said wireless
3 mobile to allow different subsets of said sensors to be primarily relied upon for
4 sensing data for different potential holding patterns of said wireless mobile.
 - 1 3. The wireless mobile phone of claim 2, wherein said subsets comprise a first
2 and a second subset to be primarily relied upon for sensing data for a left hand and
3 a right hand holding pattern.
 - 1 4. The wireless mobile phone of claim 1, wherein said means comprises means
2 to compare sensing data being received from said sensors against a plurality of
3 reference characteristic profiles.

1 5. The wireless mobile phone of claim 1, wherein said means comprises means
2 to select a set of weights to be applied to normalize sensing data received from said
3 sensors.

1 6. The wireless mobile phone of claim 1, wherein said means comprises means
2 to request a user to confirm a generated heart rate in a calibration mode of
3 operation.

Sub
A2 }
2 7. The wireless mobile phone of claim 1, wherein said means comprises a
3 plurality of programming instructions designed to perform said inference of a
4 holding pattern of the wireless mobile phone and said generation of a heart rate of
the user.

1 8. The wireless mobile phone of claim 1, wherein said means comprises
2 circuitry for performing said inference of a holding pattern of the wireless mobile
3 phone and said generation of a heart rate of the user.

1 9. A palm sized personal digital assistant (PDA) comprising:
2 memory;
3 a processor coupled to the memory;
4 a plurality of sensors to sense and output blood flow rate data of a user
5 holding the PDA, with the sensors being distributively disposed at a plurality of
6 locations of the PDA; and
7 means coupled to the sensors to infer a holding pattern of the PDA and to
8 generate a heart rate of the user using a subset of the blood flow rate data output by
9 said sensors, based at least in part on the inferred holding pattern.

15

1 10. The PDA of claim 9, wherein the sensors comprise a first and a second
2 subset disposed along a first and a second edge of said PDA to allow different
3 subsets of said sensors to be primarily relied upon for sensing data for different
4 potential holding patterns of said PDA.

1 11. The PDA of claim 10, wherein said subsets comprise a first and a second
2 subset to be primarily relied upon for sensing data for a left hand and a right hand
3 holding pattern.

1 12. The PDA of claim 9, wherein said means comprises means to compare
2 sensing data being received from said sensors against a plurality of-reference
3 characteristic profiles.

1 13. The PDA of claim 9, wherein said means comprises means to select a set of
2 weights to be applied to normalize sensing data received from said sensors.

1 14. The PDA of claim 9, wherein said means comprises means to request a user
2 to confirm a generated heart rate in a calibration mode of operation.

Sub A3 1 15. The PDA of claim 9, wherein said means comprises a plurality of
2 programming instructions designed to perform said inference of a holding pattern of
3 the PDA and said generation of a heart rate of the user.

1 16. The PDA of claim 9, wherein said means comprises circuitry for performing
2 said inference of a holding pattern of the PDA and said generation of a heart rate of
3 the user.

1 17. A mobile client device comprising:
2 a plurality of sensors to sense and output blood flow rate data of a user
3 holding the mobile client device, with the sensors being distributively disposed at a
4 plurality of locations of the mobile client device; and
5 means coupled to the sensors to infer a holding pattern of the mobile client
6 device and to generate a heart rate of the user using a subset of the blood flow rate
7 data output by said sensors, based at least in part on the inferred holding pattern.

1 18. The mobile client device of claim 17, wherein the sensors comprise a first and
2 a second subset disposed along a first and a second edge of said mobile client
3 device to allow different subsets of said sensors to be primarily relied upon for
4 sensing data for different potential holding patterns of said mobile client device.

1 19. The mobile client device of claim 17, wherein said means comprises means
2 to compare sensing data being received from said sensors against a plurality of
3 reference sensing data profiles.

1 20. The mobile client device of claim 17, wherein said means comprises means
2 to select a set of weights to be applied to normalize sensing data received from said
3 sensors.

1

ADD CS 7

17